



**ROANOKE COUNTY COMMUNITY DEVELOPMENT
COMMERCIAL FIRE SUPPRESSION SYSTEM SUBMITTAL
CHECKLIST**

Project Name: _____		Date: _____	
Occupancy Address: _____			
Owner: _____		Telephone: _____	
Occupant/Tenant: _____		Telephone: _____	
Owner's Address: _____			
Designer: (print) _____		Signature _____	
Address: _____			
Telephone: _____		Fax: _____	Email: _____

This checklist is to accompany all plan submittals. Three complete sets of drawings, scaled to 1/8" or 1/4" per foot.² Design, layout, and installation is to be done in accordance with the current edition of the Uniform Statewide Building Code and all adopted standards.* Information on shop drawings should include all of the following applicable items, and please mark N/A where appropriate:

1. ___ Floor plans dimensioned showing, in plan view, locations and spacing of all devices, and the locations of all walls and/or partitions. Please indicate construction of the protected enclosure and partitions and how the rated assemblies will be maintained when penetrated by equipment and/or wiring, per IBC section 712
2. ___ Point of compass (i.e. direction of north)
3. ___ Enclosure cross section, full height or schematic diagram, including location of construction of building floor/ceiling assemblies above and below, raised access floor and suspended ceiling.
4. ___ Type of agent being used by brand name and chemical nomenclature; please include design extinguishing or inerting concentration of mixture as applicable
5. ___ Description of occupancies and hazards being protected, designating whether or not the enclosure is normally occupied
6. ___ Description of the agent storage containers used including internal volume, storage pressure and nominal capacity expressed in units of agent mass, or volume at standard conditions of temperature and pressure
7. ___ Description of nozzle(s) used including size, orifice port configuration, and equivalent orifice area
8. ___ Description of pipe and fittings used including material specifications, grade and pressure rating

9. ___ Description of wire or cable used including classification gauge (AWG), shielding, number of strands in conductor, conductor material and color-coding schedule. Segregation requirements of various system conductors shall be clearly indicated. The required method of making wire terminations shall be detailed
10. ___ Description of the method of detector mounting
11. ___ Equipment schedule or bill of materials for each piece of equipment or device showing device name, manufacturer, model or part number, quantity and description
12. ___ Plan view of protected area showing enclosure partitions (full and partial height); agent distribution system including agent storage containers, piping, nozzles; type and location of pipe hangers; detection, alarm, and control system including all devices and schematic wiring interconnection between them; end-of-line device locations; location of controlled devices such as dampers and shutters; location of instructional signage
13. ___ Isometric view of agent distribution system showing the length and diameter of each pipe segment; node reference numbers relating to the flow calculations; fittings including reducers and strainers; orientation of tees, nozzles including size, orifice port configuration, flow rate and equivalent orifice area
14. ___ Details of each unique rigid pipe support configuration showing method of securement to the pipe and to the building structure¹
15. ___ Manufacturer's data sheets on all equipment used in the system. Where manufacturer's data sheets over multiple devices, indicate those devices used in the system.
16. ___ Complete step-by-step description of the system sequence of operations including functioning of abort and maintenance switches, delay timers, and emergency power shutdown
17. ___ Complete calculations to determine volume and quantity of agent and capacity of backup batteries, if necessary. Flow calculations shall be performed in accordance with approved engineering methods prescribed by the appropriate standard. The system shall be within the manufacturer's listed limitations

¹Piping hanging supports in areas with a seismic design category of other than A or B must be reviewed and approved by the registered design professional in accordance with IBC section 1621 and ASCE 7, section 9.6.

²Fire protection system design is considered engineering work and must be done under the supervision of the design professional of record, where applicable with State Law. Fire alarm shop drawings must first be submitted to the design professional, where applicable and stamped "approved" prior to submittal to our office. For more information please see the SFPE Position Statement; *The Role of the Engineer and the Technician Designing Fire Protection Systems* at

http://www.sfpe.org/upload/sfpe_position_statement_october_2005_001.pdf

*Currently adopted edition of applicable standards for general design/installation:

- *International Building Code 2003; International Fire Code 2003*
- NFPA 11-1998 Low Expansion Foam
- NFPA 11A-1999 Medium- and High-Expansion Foam
- NFPA 12-2000 Carbon Dioxide Extinguishing Systems
- NFPA 12A-1997 Halon 1301 Fire Extinguishing Systems
- NFPA 16-1999 Installation Foam-Water Sprinkler & Foam-Water Spray Systems
- NFPA 2001-2000 Clean Agent Fire Extinguishing Systems